resource sharing/energy saving mode. In certain embodiments, the MIMO configuration may be disabled. Power may then be tapped from the identified radio unit **260** to all other cell sectors and all other radio units **260** may be disabled.

[0077] At step **955**, it may be determined whether the individual cell PRB utilization in the now only operating radio unit **260** is greater than an uplink radio unit threshold. If the PRB utilization is not greater than the threshold, the SON analysis of step **940** may be performed to identify another radio unit **260** that can accommodate the current running traffic based on current cell sector loading. In a particular embodiment, any identified radio unit **260** must be able to handle the additional traffic of the low load sector while maintaining a user defined PRB reservation threshold and/or satisfying QoS admission control. The network node may then be switched to the resource sharing mode that will permit the newly identified radio unit to provide service to all cell sectors. Power may then be tapped from the newly identified radio unit and provided to each cell sector. All other radio units **260** may remain disabled and the method will terminate.

[0078] If at step **955**, it is determined instead that the individual cell PRB utilization is not greater than the uplink radio unit threshold, the method continues to step **960**. At step **960**, the network node may be switched from the resource sharing/energy saving mode to the normal mode if feasible. MIMO or CDD may be configured if feasible.

[0079] Returning to steps **905** and **910**, if it is determined that at least one radio unit is inactive but not failing, the method continues to step **955**. At step **955**, it may be determined whether the individual cell PRB utilization in the operating radio unit **260** is greater than an uplink radio unit threshold. If the PRB utilization is not greater than the threshold, the SON analysis of step **940** may be performed to identify a radio unit **260** that can accommodate the current running traffic based on current cell sector loading. In a particular embodiment, any identified radio unit **260** must be able to handle the additional traffic of the inactive radio unit **260** while maintaining a user defined PRB reservation threshold and/or satisfying QoS admission control. The network node may then be switched to the resource sharing mode that will permit the identified radio unit to provide service to the cell sector associated with the inactive radio unit. Power may then be tapped from the identified radio unit and provided to the cell sector associated with the inactive radio unit. The method may then terminate.

[0080] If at step **955**, it is determined instead that the individual cell PRB utilization is not greater than the uplink radio unit threshold, the method continues to step **960**. At step **960**, the network node may be switched from the resource sharing/energy saving mode to the normal mode if feasible. Additionally, MIMO and CDD may be configured if feasible.

[0081] Modifications, additions, or omissions may be made to the steps depicted in FIG. **9** without departing from the scope of the invention. The steps may be performed in any suitable order. Additionally, the methods may include more, fewer, or other steps. For example, in certain embodiments, additional checks may be performed to determine whether radio unit resource sharing should not be implemented. For example, the SON algorithm may be optimized to optionally check for PCI confusion and/or prevent maximum limits for cell neighbors from being exceeded prior to enabling radio unit sharing. If any such confusion or if maximum limits are exceeded, the radio unit services may not be shared.

[0082] The above described systems and methods are provided to maintain wireless coverage to wireless devices **110** in faulty or low load sectors. FIG. **10** illustrates an example wireless communication device **110** according to certain embodiments. Examples of wireless communication device **110** include a mobile phone, a smart phone, a PDA (Personal Digital Assistant), a portable computer (e.g., laptop, tablet), a sensor, a modem, a machine type (MTC) device/machine to machine (M2M) device, laptop embedded equipment (LEE), laptop mounted equipment (LME), USB dongles, a device-to-device capable device, or another device that can provide wireless communication. A wireless communication device **110** may also be referred to as user equipment (UE), a station (STA), a mobile station (MS), a device, a wireless device, or a terminal in some embodiments. Wireless communication device **110** includes transceiver **1010**, processor **1020**, and memory **1030**. In some embodiments, transceiver **1010** facilitates transmitting wireless signals to and receiving wireless signals from network node **120** (e.g., via an antenna **1140**), processor **1020** executes instructions to provide some or all of the functionality described above as being provided by wireless communication device **110**, and memory **1030** stores the instructions executed by processor **1020**.

[0083] Processor **1020** includes any suitable combination of hardware and software implemented in one or more modules to execute instructions and manipulate data to perform some or all of the described functions of wireless communication device **110**. In some embodiments, processor **1120** includes, for example, one or more computers, one or more central processing units (CPUs), one or more microprocessors, one or more applications, and/or other logic.

[0084] Memory **1030** is generally operable to store instructions, such as a computer program, software, an application including one or more of logic, rules, algorithms, code, tables, etc. and/or other instructions capable of being executed by a processor. Examples of memory **1030** include computer memory (for example, Random Access Memory (RAM) or Read Only Memory (ROM)), mass storage media (for example, a hard disk), removable storage media (for example, a Compact Disk (CD) or a Digital Video Disk (DVD)), and/or or any other volatile or non-volatile, non-transitory computer-readable and/or computer-executable memory devices that store information.

[0085] Other embodiments of wireless communication device **110** include additional components (beyond those shown in FIG. **10**) responsible for providing certain aspects of the wireless communication device's functionality, including any of the functionality described above and/or any additional functionality (including any functionality necessary to support the solution described above).

[0086] FIG. **11** is a block diagram illustrating a core network node **130**. Examples of core network node **130** can include a mobile switching center (MSC), a serving GPRS support node (SGSN), a mobility management entity (MME), a radio network controller (RNC), a base station controller (BSC), and so on. Core network node **130** includes processor **1120**, memory **1130**, and network interface **1140**. In some embodiments, processor **1120** executes instructions to provide some or all of the functionality described above as being provided by core network node **130**, memory **1130** stores the instructions executed by processor **1120**, and network interface **1140** communicates signals to an suitable node, such as